

Application No.: 09/735,607Docket No.: 4481-037**In the Claims**

Please amend claims 1, 3-6, and 8-11 and add new claims 13-22 as follows:

1. (currently amended) A method of measuring the efficiency of data transmission in a network in which data packets have sequence numbers and sending stations retransmit packets which are deemed to be lost, comprising the steps of:

monitoring the occurrence of packets at a point in the network;

tracking the sequence numbers of packets successively monitored ~~packets~~ at the point;

~~attributing~~ detecting occurrence of a sequence number less than ~~[[the]]~~ a next expected sequence number to retransmission of a packet as being indicative of occurrence of packet retransmission;

incrementing a retransmission count in accordance with the quantity of retransmitted data; and

reporting the retransmission count as indicative of the transmission efficiency.

2. (original) The method of claim 1, wherein the network uses TCP.

3. (currently amended) The method of claim 2, wherein ~~[[the]]~~ TCP traffic in the network at the monitored point is coherent TCP traffic which traverses the monitored point in the order of packet transmission.

4. (currently amended) The method of claim 1, ~~wherein~~ further including selecting at least one specific connection ~~is selected~~ for monitoring by reference to at least one ~~or more~~

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~~of the of:~~ (a) an IP address of a connection end-point, (b) a port at an end-point, and (c) a protocol.

5. (currently amended) The method of claim 1, including the step of attributing a sequence number greater than the next expected number to loss of a packet and incrementing a loss count by the size of ~~[[the]]~~ a lost TCP payload, ~~wherein the loss count is used to determine and determining~~ the location of a fault relative to the location of the monitoring point by using the loss count.

6. (currently amended) The method of claim 5, ~~wherein~~ further including determining the location of the fault by comparing counts obtained from different monitoring points ~~are compared to determine the location of the fault~~.

7. (original) The method of claim 1, including the step of deriving a measure of total volume of packets transmitted as a function of the retransmission count.

8. (currently amended) A method of monitoring data transmission in a network in which data packets have sequence numbers and sending stations retransmit packets which are deemed to be lost, comprising the steps of:

monitoring the occurrence of packets at a point in the network;

tracking the sequence numbers of packets successively monitored at the point ~~packets~~;

~~attributing~~ detecting occurrence of a sequence number greater than a ~~the~~ next expected sequence number to ~~loss of a packet as being indicative of occurrence of packet~~ loss at the point; and

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incrementing a loss count in accordance with the quantity of lost data packets at the point; and

reporting the loss count as indicative of the transmission quality.

9. (currently amended) The method of claim 8, wherein at least one specific connection is selected for monitoring by reference to at least one or more of the of: (a) an IP address of a connection end-point, (b) a port at an end-point, and (c) a protocol.

10. (currently amended) The method of claim [[8]] 1, further including wherein the loss count is used to determine determining the location of a fault relative to the location of the monitoring point by using the loss count.

11. (currently amended) The method of claim 10, further including determining the location of the fault by comparing wherein counts obtained from different monitoring points are compared to determine the location of the fault of the network.

12. (original) The method of claim 8, including the step of deriving a measure of total volume of packets transmitted as a function of the loss count.

13. (new) Apparatus for measuring the efficiency of data transmission in a network in which data packets have sequence numbers and sending stations retransmit packets which are deemed to be lost, comprising a processor arrangement arranged to:

monitor the occurrence of packets at a point in the network;

track the sequence numbers of packets successively monitored at the point;

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detect occurrence of a sequence number less than a next expected sequence number as being indicative of occurrence of packet retransmission;

increment a retransmission count in accordance with the quantity of retransmitted data; and

report the retransmission count as indicative of the transmission efficiency.

14. (new) The apparatus of claim 13, wherein the processor arrangement is arranged to attribute a sequence number greater than the next expected number to loss of a packet and increment a loss count by the size of a lost TCP payload, and determine the location of a fault relative to the location of the monitoring point by using the loss count.

15. (new) The apparatus of claim 14, wherein the processor arrangement is arranged to determine the location of the fault by comparing counts obtained from different monitoring points of the network.

16. (new) The apparatus of claim 13, wherein the processor arrangement is arranged to derive a measure of total volume of packets transmitted as a function of the retransmission count.

17. (new) The apparatus of claim 13, further including a monitor for the packets adapted to be coupled to the point.

18. (new) Apparatus for measuring the efficiency of data transmission in a network in which data packets have sequence numbers and sending stations retransmit packets which are deemed to be lost, comprising a processor arrangement arranged to:

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monitor the occurrence of packets at a point in the network;
track the sequence numbers of packets successively monitored at the point;
detect occurrence of a sequence number greater than a next expected sequence number
as being indicative of occurrence of packet loss, at the point;
increment a loss count in accordance with the quantity of lost data; and
report the lost count as indicative of the transmission quality.

19. (new) The apparatus of claim 18, wherein the processor arrangement is arranged to:

- (a) attribute a sequence number greater than the next expected number to loss of a packet,
- (b) increment a loss count by the size of a lost TCP payload, and
- (c) determine the location of a fault relative to the location of the monitoring point by using the loss count.

20. (new) The apparatus of claim 19, wherein the processor arrangement is arranged to determine the location of the fault by comparing counts obtained from different monitoring points.

21. (new) The apparatus of claim 18, further including a monitor for the packets adapted to be coupled to the point.